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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/019,397
Filing Date: December 28, 2001
Appellant(s): POULAKIS, KONSTANTINOS

Mark Biggs
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 1/19/07 appealing from the Office action mailed 4/20/06.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

This appeal involves claims 11-26, 28-38, and 43. There is no claim 48.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

3,876,495	ESLER	4-1975
4,057,956	TOLLE	11-1977

4,718,718	MARUYAMA	1-1988
4,874,670	BOON et al.	10-1989
5,095,915	ENGELSON	3-1992
6,478,382	SCHULTE	11-2002
ZA 98050078	SCHULTE	3-1999

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 11, 15, 17, and 28 are rejected under 35 U.S.C. 103(a) as being obvious over Esler(U.S. Patent 3,876,495).

Esler discloses a flexible cord for seats which has a core formed from polymer fibers which is covered in an extruded foam coating which reduces the slippage of the cord.(Col. 2, ll. 2-17; Col. 3, ll. 48-50; Col. 6, ll. 57) The material is capable of securing a cover to a cushion. The coating increases tear resistance since it decreases the slippage. It is noted that the claim does not require the insertion of the cord into the cushion, but rather only that it is capable of doing so. Since the cord is thin enough and flexible enough to be inserted into a cushion, it is capable of being inserted. While the reference does not disclose the hardnesses of the core or foam coating, it would have been obvious to one of ordinary skill in the art at the time the invention was made to make the foam coating softer than the core since the foam coating, which is intended to be velvety and flexible(Col. 3, ll. 41) would be softer than a material which is intended to be reinforcing(Col. 2, ll. 23) particularly since reinforcing implies that the core is stronger than the foam by itself. It is noted there is nothing in the claim positively

requiring the softness of the plastic material to refer to the composition of the plastic material rather than its structural properties.

Regarding claims 17 and 28, extrusion is considered a hot coating method.(Col. 5, ll. 57)

Claims 11, 12, 15, 17, 22-24, 28, and 30-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schulte(ZA 9805087A) in view of Esler, and Maruyama. U.S Patent 6,478,382 is considered an English language translation of ZA 9805087A and all column and line numbers refer thereto.

Schulte discloses a flexible shaped strip which serves to secure a cover to a foamed seat cushion having a longitudinal slit into which the strip is applied.(Figures 1 and 2; Abstract; Col. 1, ll. 6-13; Col. 4, ll. 3) The part of the strip containing the slit into which the cover is inserted is provided with an anti-slip means.(Col. 3, ll. 52-57) The reference does not disclose what these anti-slip means are. Esler discloses coating a strip used in seats with a foam material to prevent slippage of the strip relative to the material surrounding it.(Col. 2, ll. 2-17; Col. 3, ll. 48-50) This material is soft and flexible. Maruyama et al. discloses applying a rubber layer to the outside of a wire which is in a strip which secures a cover to a foamed seat cushion though the reference is silent with regards to the hardness.(Col. 2, ll. 4-11; Col. 3, ll. 27-30) Rubber is an anti-slip material and appellant's claim 22 indicates it is considered a plastic material. It would have been obvious to one of ordinary skill in the art at the time the invention was made to coat the shaped strip of Schulte with a material which is anti-slip as shown in Esler since Schulte discloses using anti-slip means but is silent as to the exact nature of

those means, since Esler discloses coating a plastic core with a soft, flexible plastic material to prevent slippage of the strip when used in a seat cushion, and since Maruyama et al. discloses it is known to coat strips that perform the same function, namely holding seat covers in seat cushions, with rubber which is an anti-slip material. While the reference does not disclose the hardnesses of the core or anti-slip coating, Esler shows the anti-slip coating is intended to be velvety and flexible(Esler, Col. 3, ll. 41) while the strip is intended to be reinforcing(Esler, Col. 2, ll. 23), clearly suggesting the anti-slip coating is softer than the core. It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the anti-slip coating a material which was softer than the core since Esler suggests the coating is softer than the core, and since this would place a softer material closer to the person sitting in the chair while retaining the strength(hardness) necessary to prevent the strip from breaking by forming the core of a harder material. While the references do not state the anti-slip means increases tear resistance of the strip, Schulte does disclose the anti-slip means improve anchoring of the strip in the channel.(Col. 3, ll. 54-55) Since appellant's claim indicates improved tear resistance results in the ability of the strip to resist removal from the cushion and improved anchoring of the strip in the channel as described by Schulte also means it resists removal from the cushion, Schulte is considered to teach increasing the tear resistance of the strip.

Regarding claim 9, the profile of the shaped strip is round.(Figure 1)

Regarding claims 12 and 32, while the references do not disclose the specific hardness of the material, a hardness of 150 is very hard, and one in the art would appreciate that

since the foam of Esler was intended to be flexible(Col. 3, ll. 3), it would have a hardness of less then 150.

Regarding claims 17 and 28, Esler discloses extruding the coating, and extrusion is considered a hot coating method.(Col. 4, ll. 25-26; Col. 6, ll. 57; Figure 4)

Regarding claim 22, while Schulte is silent as to the specific material of the anti-slip means, Esler discloses the foam can be made from polyurethane.(Col. 4, ll. 11) Since polyurethane foam was created to replace natural rubber, one in the art would appreciate that it is a rubber-type plastic. Additionally Maruyama shows the use of rubber as an anti-slip coating.

Regarding claims 23 and 31, Schulte discloses the anti-slip means are located in the recesses(30, 32). Since it does not disclose applying the anti-slip means to the raised areas between the recesses, one in the art would appreciate that it was applied only to the recesses.(Col. 3, ll. 52-60)

Regarding claim 30, Schulte discloses the strip has a top surface with a longitudinal slot and longitudinal interlocking members on the side surfaces of the strip(14) with recesses(30,32) therebetween. While the reference does not expressly disclose fastening means to holding the fabric in the slot, one in the art would appreciate that some sort of fastening means would be present since the purposes of the strip is for the fabric to be inserted into the slot in the strip and not be removed. As the fabric contacts the shaped strip on the top, one in the art would appreciate the anti-slip means would be provided on surfaces which contact the fabric, particularly since Esler shows the anti-slip material covering the entire strip.

Claims 12-14, 32, and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references as applied to claim 11 above, and further in view of Tolle(U.S Patent 4,057,956).

The references cited above do not disclose the hardness of the anti-slip material. Tolle discloses forming an anti-slip layer on a cable wherein the coating has a hardness of 60-70 so that it will be flexible but hard enough to prevent tearing and wear of the coating during use.(Col. 2, ll. 60-61; Col. 3, ll. 55-61) It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the anti-slip layer have a hardness of about 60-70 since this would make it flexible but hard enough to prevent tearing and wear of the coating during use.(Col. 2, ll. 60-61; Col. 3, ll. 55-61)

Claims 18, 19, 25, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references as applied to claim 11 above, and further in view of Engelson(U.S. Patent 5,095,915).

The references cited above do not disclose how the coating is applied to the strip. Engelson discloses that coatings can be conventionally applied to thin strips by extrusion or dip coating.(Col. 4, ll. 31-37) It would have been obvious to one of ordinary skill in the art at the time the invention was made to use any conventional coating method to apply the anti-slip material to the shaped strips such as extrusion or dip coating since they are conventional methods of applying coatings to thin strips(Col. 4, ll. 31-37).

Regarding claim 18, spraying is considered a conventional method of applying a coating, and it would have been obvious to one of ordinary skill in the art at the time the

invention was made to use any conventional coating method to apply the anti-slip material to the shaped strips such as spraying since it is an extremely well known method of applying coatings to thin strips.

Regarding claims 25 and 26, while the references do not indicate applying the anti-slip material as flakes or clots, one in the art would appreciate that any conventional coating method could be used to apply the material.

Claims 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schulte, Esler, and Maruyama et al. as applied to claim 11 above, and further in view of Boon et al.(U.S. Patent 4,874,670).

The references cited above do not disclose the coating being an ultraviolet or electron curable material which is cured. One in the art would appreciate that any type of material that would form a relatively soft anti-slip coating could be used. Such materials include rubbers, which should be cured to be usable. Since thermal curing would melt the plastic the rubber is coated on, one in the art would appreciate that a different type of cure such as ultraviolet, which is well-known in the curing arts, would be used in place of a thermal cure for rubber coatings. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use ultraviolet radiation to cure the coating on the shaped strip since this would allow curing of the coating without exposing the strip to high temperatures that would degrade the polymer used as the base for the strip and since ultraviolet and electron beam curing are well-known and conventional in general in the bonding arts as curing methods as shown for example by

Boon et al. which discloses using ultraviolet and electron beam curable rubbers as coatings.(Col. 2, ll. 3-6, 59-61)

Claims 11, 29, 34-38, 43, and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schulte(ZA 9805087A) in view of Esler, and the admitted prior art. U.S Patent 6,478,382 is considered an English language translation of ZA 9805087A and all column and line numbers refer thereto.

Schulte discloses a flexible shaped strip which serves to secure a cover to a foamed seat cushion having a longitudinal slit into which the strip is applied.(Figures 1 and 2; Abstract; Col. 1, ll. 6-13; Col. 4, ll. 3) Schulte discloses the strip has a top surface with a longitudinal slot and longitudinal interlocking members on the side surfaces of the strip(14) with recesses(30,32) therebetween. While the reference does not expressly disclose fastening means to holding the fabric in the slot, one in the art would appreciate that some sort of fastening means would be present since the purposes of the strip is for the fabric to be inserted into the slot in the strip and not be removed. The part of the strip containing the slit into which the cover is inserted is provided with an anti-slip means.(Col. 3, ll. 52-57) The reference does not disclose what these anti-slip means are. Esler discloses coating a strip used in seats with a foam material to prevent slippage of the strip relative to the material surrounding it.(Col. 2, ll. 2-17; Col. 3, ll. 48-50) The admitted prior art discloses it is known to configure strips from anti-slip components.(Pg. 2, ll. 2-3) Since the purpose of this is to prevent the slippage of the strip relative to the foam ,this is considered to teach that the anti-slip components directly contact the foam. It would have been obvious to one of ordinary

skill in the art at the time the invention was made to coat the shaped strip of Schulte with a material which is anti-slip as shown in Esler since Esler discloses coating a plastic core with a plastic material to prevent slippage of the strip when used in a seat cushion, and since the admitted prior art discloses it is known to make the strips from anti-slip components which directly contact the foam. While the reference does not disclose the hardnesses of the core or anti-slip coating, Esler shows the anti-slip coating is intended to be velvety and flexible(Esler, Col. 3, ll. 41) while the strip is intended to be reinforcing(Esler, Col. 2, ll. 23), clearly suggesting the anti-slip coating is softer than the core. It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the anti-slip coating a material which was softer than the core since Esler suggests the coating is softer than the core, and since this would place a softer material in contact with the person sitting in the chair while retaining the strength(hardness) necessary to prevent the strip from breaking by forming the core of a harder material. While the references do not state the anti-slip means increases tear resistance of the strip, Schulte does disclose the anti-slip means improve anchoring of the strip in the channel.(Col. 3, ll. 54-55) Since appellant's claim indicates improved tear resistance results in the ability of the strip to resist removal from the cushion and improved anchoring of the strip in the channel as described by Schulte also means it resists removal from the cushion, Schulte is considered to teach increasing the tear resistance of the strip.

Regarding claim 35, Esler discloses extruding the coating, and extrusion is considered a hot coating method.(Col. 4, ll. 25-26; Col. 6, ll. 57; Figure 4)

Regarding claim 37, Schulte discloses the anti-slip means are located in the recesses(30, 32). Since it does not disclose applying the anti-slip means to the raised areas between the recesses, one in the art would appreciate that it was applied only to the recesses.(Col. 3, ll. 52-60)

Regarding claim 34, Schulte discloses a longitudinal channel in a seat cushion into which the strip is inserted.(Col. 3, ll. 12-15)

Regarding claims 36 and 44, the anti-slip means is applied to the top surface(28) of the shaped strip.(Col. 3, ll. 53-57)

Regarding claims 38 and 43, while the references do not disclose the thickness of the slip preventer relative to the strip, one in the art would appreciate that since the purpose of the slip preventer is to interact with the cushion to prevent slippage, it would not need to be very thick, and would therefore make the slip preventer layer thin since a thick layer would not be required and since it is easier to apply a thin layer of material to a substrate than a thick layer since a thin layer hardens/dries faster.

Regarding claim 45, Schulte discloses a fastener(35) which is coupled to the shaped strip.(Col. 3, ll. 38-44)

(10) Response to Argument

Regarding appellant's argument that Esler is not a flexible shaped strip for securing a covering to a cushion having a slip preventer that increases tear resistance to prevent removal, claim 11 does not require such. It only requires that the strip be capable of doing such. The strip is not actually inserted into the cushion in the claims where Esler is the only reference.

Regarding appellant's argument that Esler does not disclose a plastic that is softer than the plastic material of the core, the claim does not positively require the softness of the plastic material to refer to the composition of the plastic material rather than its structural properties. Clearly the foam layer is softer than the fibrous inner layer. Additionally, one in the art would appreciate that a material intended to be velvety would be softer than one intended to be reinforcing.

Regarding appellant's argument that Esler discloses a bundles of fibers rather than a shaped strip, the bundle of fibers is a combination of long narrow pieces of material ,the definition of a strip and these bundles have a shape, so they are shaped.

Regarding appellant's argument that Esler has no structure that would enable the cord to connect to a fabric, the claim does not require such a structure. Clearly, if appellant's strip without such a requirement can hold a fabric in place, the welting cord of Esler would also be capable of such.

The evidence submitted is insufficient to establish a reduction to practice of the invention in this country or a NAFTA or WTO member country prior to the effective date of the Schulte reference. Appellant has not shown possession of the whole invention as claimed since the evidence does not show the slip preventer being of a softer material than the strip, and actually indicates that the softnesses of the materials are not important. Appellant must establish possession of either the whole invention claimed or something falling within the claim in the sense that the claim as a whole reads on it.(MPEP 715.02)

Regarding appellant's argument that glue is inherently softer than a shaped strip, the evidence does not disclose the material the shaped strip is made of, let alone its hardness or that of the glue. Different cured glues can have different hardnesses.

Regarding appellant's argument that the declaration only needs to show the portion of the invention taught by the reference, that is only applicable when the examiner has asserted that the difference between the reference and the invention is obvious, i.e. the examiner has not used another reference to show the invention. In this case, the examiner has used two other references, Esler and Maruyama, to show the concept of the exterior coating being softer than the shaped strip. Therefore, appellant must show possession of either the whole invention claimed or something falling within the claim in the sense that the claim as a whole reads on it.

Regarding appellant's argument that the declaration does not disclose the softness is not important, examiner agrees the declaration does not explicitly state the softness is not important, only that the hardness was not of interest, suggesting that it was not important.

Regarding appellant's argument that Schulte does not disclose an anti-slip coating on the outside of the strip, Schulte clearly indicates the recesses are provided with anti-slip means. This indicates that something is applied to them as the providing of anti-slip means is listed as an alternative to the inherent configuration providing anti-slip characteristics.(Col. 3, ll. 52-55)

Regarding appellant's argument that the foam of Esler is not provided to increase the anti-slip properties of the fiber core, the reference clearly indicates the foam is used

to prevent slippage of the cord relative to the fabric is in located within.(Col. 2, ll. 14-18; Abstract) The foam provides an anti-slip function between the cord and the fabric covering it. Appellant also uses his material to provide anti-slip properties between the cord and a fabric, the difference being that appellant's fabric is not formed so that it surrounds the cord permanently, i.e. it is not sewn into a tube, but rather the fabric surrounds the core since it is pressed into a groove such that the fabric surrounds it but it can be removed from the fabric.

Regarding appellant's argument that the purpose of the foam of Esler is to provide bulk and not anti-slip characteristics, the reference clearly indicates the foam provides ant-slip characteristics.(Col. 2, ll. 14-17)

In response to appellant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Esler discloses coating a strip with another layer which prevents slippage of the strip relative to the material surrounding it.

Regarding appellant's argument that Maruyama does not disclose a wire that directly contacts the foam cushion, Schulte discloses the strip with anti-slip means directly contacts the cushion.(Col. 2, ll. 55- Col. 3, ll. 9). Examiner did not indicate that

the rubber covered wire of Maruyama directly contacted the seat cushion. Rather the rubber acts as an anti-slip material between the wire and the cover. Examiner is not suggesting directly using the wire of Maruyama in the method of Schulte, but rather that it would also suggest to one in the art to cover the cord which holds the seat cover in the cushion with rubber since Maruyama is directed to a similar wire present in seat cushions.

Regarding appellant's argument that the shaped strip does not contact the person sitting in the chair, appellant's own specification indicates that hard materials used in the strip lead to reduction in seat comfort, clearly indicating that a hard material in the cushion would cause discomfort to the seated person, therefore clearly contacting them in some way, whether directly or indirectly.

In response to appellant's argument that Tolle is nonanalogous art, it has been held that a prior art reference must either be in the field of appellant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the appellant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See In re Oetiker, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, the reference is reasonably pertinent to appellant's problem, namely the slippage between components. Tolle is reasonably pertinent to appellant's problem, the prevention of slip between two materials since it is directed to preventing slippage between two articles.

In response to appellant's argument that the references fail to show certain features of appellant's invention, it is noted that the features upon which appellant relies (i.e., that the anti-slip layer directly contacts the foam) are not recited in the rejected

claims 11-28 and 30-32. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Although appellant indicates this is the invention, the rejection is not based on appellant's general description of the invention, but rather what appellant has claimed, as otherwise, the scope of the protected invention would not be clear.

Regarding appellant's argument that Boon et al. is not applying a coating to a shaped strip, Schulte is.

Regarding appellant's argument that the admitted prior art does not disclose applying anti-slip to the exterior of the shaped strip, Esler does.

Regarding appellant's argument that Schulte does not disclose longitudinal interlocking members, the members 14 greatly resemble appellant's 30, and therefore are also considered to be longitudinal interlocking members as that is what appellant's 30 is described as.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Barbara Musser

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